



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/701,153

11/03/2003

Paul Raymond Rust

5564

20606

7590

10/19/2006

KEITH FRANTZ  
401 WEST STATE STREET  
SUITE 200  
ROCKFORD, IL 61101

EXAMINER

LAUX, JESSICA L

ART UNIT

PAPER NUMBER

3635

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/701,153	Applicant(s) RUST ET AL.	
	Examiner Jessica Laux	Art Unit 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 09/06/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that "Hubbard does not teach, disclose, or even suggest that its single ply membrane is capable of 'bridging a gap between adjacent building modules' or that it can be used to 'sealably engage adjacent generally coextensive edge strips of a roof membranes covering the modules' and that Hubbard does not suggest anything concerning building modules or sealing between the roof membranes on the building modules", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The membrane of Hubbard meets all of the structural limitations of the claim and is inherently capable performing the intended use.

In response to applicant's argument that Hubbard does not disclose a porous reinforcing layer within an adhesive layer, the reinforcing of Hubbard **is within** the adhesive layer as it is in the area, within the bounds, and inside (where the inside of the adhesive is toward the waterproof membrane) of the adhesive layer.

In response to applicant's argument that Hubbard does not teach, disclose or mention "a self supporting bridge resistant to detrimental sagging if positioned over a gap", a recitation of the intended use of the claimed invention must result in a structural

Art Unit: 3635

difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since the structure of Hubbard meets the limitations of the claim it is capable of performing the intended use of being a self-supporting bridge if positioned over a gap.

In response to applicant's argument that Hubbard does not disclose the reinforcing layer embedded within the adhesive layer or extending through the interstices of the reinforcing material, the fact that the reinforcing is intermediate a hot melt adhesive and considering the properties of a hot melt adhesive, the hot melt adhesive will extend through the interstices of the reinforcing to adhere to the waterproof membrane thereby embedding the reinforcing in the adhesive.

In response to applicant's arguments regarding claim 11 pertaining to the material of the adhesive layer, and in light of the above, the examiner directs applicant's attention to the office action mailed 02/28/2006, page 4, where reference is made to paragraph [0019] of the Hubbard reference.

In response to applicant's arguments regarding claims 8, 10, 12-15 and 17, reference the above response to arguments.

In response to applicant's arguments regarding design choice in relation to claims 12, 13 and 15, applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims and specification define a patentable invention without specifically pointing out how the language of the claims and specification patentably distinguishes them from the references.

Art Unit: 3635

Further, regarding claims 13 and 15, the examiner maintains that applicant has not disclosed that having an adhesive layer of primarily uncured Butyl mixed with semi cured polymers (as in 13) or having an adhesive layer comprising cross-linked polymers (as in 15) is for a particular reason, and therefore, as explained in the rejection included in the office action mailed 02/28/2006, is an obvious design choice.

In response to applicant's argument regarding claim 14 that Hubbard teaches or suggest nothing concerning building modules or bridging a gap of specified maximum width between building modules or of the width of a reinforcing scrim in relation to such a gap, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. As the limitation in the claim of bridging a gap is an intended use and since the membrane of Hubbard meets the structural limitations of the claim the claimed invention is not distinguishable from the prior art. Further regarding the argument that Hubbard does not disclose a width of a reinforcing scrim in relation to such a gap, the reinforcing of Hubbard has a width and since a gap could be of any width the width of the Hubbard's reinforcing could be at least approximately equal to a specified maximum gap width depending on the width of the gap.

In response to applicant's arguments regarding claim 18, reference the above response to arguments.

Art Unit: 3635

In response to applicant's arguments that the Mule-Hide reference is not dated one year prior to the priority date to which the reference is directed, examiner points out that such a requirement is not necessary. The reference meets the requirements for a 35 USC 102a reference (MPEP 2132).

In light of the above response the rejection included in the office action dated 02/28/2006 is maintained and made final. It is included below for reference.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 5-7, 9, 11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hubbard (2003/0219564).

In regards to claim 5: Hubbard teaches a self adhering membrane for roofs that is capable of bridging a gap between adjacent building modules and to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules. The membrane comprises: an elastomeric adhesive layer having a tacky lower surface (14) and an oppositely facing upper surface (12); and it may include a porous reinforcing layer within the adhesive layer (paragraph [0016] lines 10-11); and a release strip (16) temporarily adhered to and covering the tacky lower surface of the adhesive

Art Unit: 3635

layer. The release strip is removable from the adhesive layer to permit positioning of the membrane. The tape being sufficiently rigid transversely to form a self-supporting bridge resistant to detrimental sagging if positioned over a gap.

In regards to claim 6: The tape according to claim 5 above, characterized by the porous reinforcing layer comprising porous scrim material embedded within the adhesive layer (paragraph [0016] lines 10-11).

In regards to claim 7: The tape according to claim 6 above, characterized by the scrim material comprising an elongate strip of generally flat material having a multiplicity of interstices, with the adhesive layer extending through said interstices between said lower and upper surfaces. Paragraph [0016] lines 10-11 describe a reinforcing mesh or scrim located between the layers wherein the adhesive layer goes between the opening of the mesh or scrim.

In regards to claim 9: The tape according to claim 6 above, characterized as being sufficiently flexible longitudinally to permit its being rolled (paragraph [0022] line 3) for storage, shipment and handling, and unrolled for application and use.

In regards to claim 11: The tape according to claim 6 above, characterized by said adhesive layer comprising at least one of the materials selected from the group consisting of EPDM, EPR, TPO, PVC, Neoprene, Butyl, Polyisobutylene, Halogenated Butyl, Halogenated Polyisobutylene, Isobutylene, reclaimed Butyl, natural rubber and Polydimethylsiloxane (PDMS) (paragraph [0019]).

Art Unit: 3635

In regards to claim 16: The tape according to claim 5 above, further comprising a protective outer layer permanently adhered to the upper surface of the adhesive layer (12).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 10, 12-15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubbard (2003/0219564).

In regards to claim 8: The tape according to claim 7 above, characterized by the scrim material being selected from the group consisting of an absorbent or woven cloth, porous fiberglass fabric, wire or plastic screen mesh, perforated plastic or metal strip, and other permeable or porous material through which a non-solid may penetrate or be forced. Scrims and meshes made of the above listed material or common in the art, therefore at the time the invention was made it would have been an obvious design choice to use one of the above listed materials for the scrim/mesh material as they are readily available and in common practice.

In regards to claim 10: Hubbard teaches a material with the structure as above that is capable of being sufficiently flexible transversely (paragraph [0017] line 5) to conform to an angle between non-coplanar edge strips of the roof membranes with the adhesive layer adhered to said edge strips.



In regards to claim 12: The tape according to claim 11 above, characterized by the adhesive layer comprising a blend consisting primarily of uncured Butyl mixed with other semi-cured polymers to provide the adhesive layer in an initial semi-cured condition. Hubbard discloses an uncured layer (paragraph [0019] lines 20-21). Applicant discloses that the layer may be non-cross-linked, partially cross-linked or fully cross-linked and can be uncured, partially cured or fully cured. As such having a layer consisting primarily of uncured Butyl mixed with semi-cured polymers to provide a semi-cured condition is considered to be an obvious design choice that does not distinguish over Hubbard as Applicant has not disclosed that the claimed subject matter provides an advantage, is used for a particular purpose, or solves a stated problem.

In regards to claim 13: The tape according to claim 6 above, characterized by the adhesive layer having a thickness of between approximately 0.040 to 0.060 inch with the reinforcing scrim embedded therein. Hubbard does not disclose expressly that the thickness is 0.04 to 0.06 inches. Instead, Hubbard indicates that the thickness ranges from 0.004 to 0.015 inches. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the thickness range from 0.040 to 0.060 because the applicant has not disclosed that this thickness provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Hubbard's adhesive and applicant's adhesive to perform equally well with either the thickness taught by Hubbard or the claimed thickness because both dimensions would perform the same function of adhering to the roof.

Art Unit: 3635

In regards to claim 14: Hubbard teaches a material that is capable of bridging a gap of a specified maximum width between building modules; where the reinforcing mesh is located between layers 12 and 14 (paragraph 0016 lines 10-11).

In regards to claim 15: The tape according to claim 6 above, characterized by the adhesive layer comprising cross-linked polymers. Hubbard discloses an adhesive layer that is not cross-linked. Applicant discloses that the layer may be non-cross-linked, partially cross-linked or fully cross-linked. As such having a layer that is non-cross-linked is considered to be an obvious design choice that does not distinguish over Hubbard, as Applicant has not disclosed that the claimed subject matter provides an advantage, is used for a particular purpose, or solves a stated problem.

In regards to claim 17: Hubbard teaches a material as in claim 16 above, that is capable of bridging the gap between building modules having roof membranes of a specified base compound; and further characterized by the protective outer layer being non-adhesive, of a thickness of between approximately 0.030 to 0.060 inch (paragraph [0016] lines 13 and 14), and formed of a base compound the same or similar to the specified base compound of the roof membranes (paragraph [0016]).

In regards to claim 18: A tape provided to bridge a specified maximum gap between adjacent building modules and to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules, the tape comprising: an elastomeric adhesive layer (14) having a tacky lower surface and an oppositely facing tacky upper surface, the adhesive layer being substantially equal in width (paragraph [0017]) to the specified maximum gap width plus the aggregate widths of the

Art Unit: 3635

coextensive edge strips of the roof membranes; a porous reinforcing material embedded in the adhesive layer, the reinforcing material comprising scrim material having a multiplicity of interstices therein (paragraph [0016] lines 10-11), the adhesive layer extending through said interstices of the reinforcing scrim between said lower and upper surfaces (paragraph [0016] lines 10-11)

While Hubbard does not disclose the exact dimensions of the reinforcing scrim, Applicant has not disclosed that having the reinforcing material being of a width of at least approximately the specified maximum gap width and less than the width of the adhesive layer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Hubbard's material with scrim and applicant's invention, to perform equally well because both have a scrim provided for the reinforcing of roofing materials and perform the same function of sealing the roof. Therefore, it would have been prima facie obvious to modify Hubbard to obtain applicant's invention because such a modification would have been considered a mere design consideration that fails to patentably distinguish over the prior art of Hubbard.

A release strip temporarily adhered to the lower surface of the adhesive layer, the release strip being removable from the lower surface (paragraph [0022] lines 1-4) to permit positioning of the adhesive layer with the reinforcing material embedded therein lengthwise over the gap between the building modules with the tacky lower surface overlapping and sealingly adhering to the coextensive edge strips of the roof membranes;

Art Unit: 3635

Hubbard does not disclose expressly that the thickness of the adhesive layer is 0.04 to 0.06 inches. Instead, Hubbard indicates that the thickness ranges from 0.004 to 0.015 inches. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the thickness range from 0.040 to 0.060 because the applicant has not disclosed that this thickness provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Hubbard's adhesive and applicant's adhesive to perform equally well with either the thickness taught by Hubbard's or the claimed thickness because both dimensions would perform the same function of adhering to the roof.

The material of Hubbard is capable of being sufficiently rigid transversely to form a self supporting bridge resistant to detrimental sagging into the gap between the building modules when positioned over the gap with the tacky lower surface adhered to the coextensive edge strips of the roof membranes; the adhesive layer with the reinforcing material embedded therein further being sufficiently flexible transversely to permit its selective deformation to generally conform to the angle between non-coplanar roof sections of building modules and adhesion of the tacky lower surface to the coextensive edge strips of roof membranes covering such roof sections, and the adhesive layer with the reinforcing material embedded therein further being sufficiently flexible longitudinally to be rolled (paragraph [022] lines 3) for storage, shipment and handling, and unrolled for application over the gap between the building modules.

Art Unit: 3635

In regards to claim 19: The tape according to claim 18 above, characterized by the adhesive layer comprising at least one of the materials selected from the group consisting of EPDM, EPR, TPO, PVC, Neoprene, Butyl, Polyisobutylene, Halogenated Butyl, Halogenated Polyisobutylene, Isobutylene, reclaimed Butyl, natural rubber and Polydimethylsiloxane (PDMS) (paragraph [0019]);

and further characterized by the scrim material being selected from the group consisting of an absorbent or woven cloth, porous fiberglass fabric, wire or plastic screen mesh, perforated plastic or metal strip, and other permeable or porous material through which a non-solid may penetrate or be forced. Scrims and meshes made of the above listed material are common in the art, therefore at the time the invention was made it would have been an obvious design choice to use one of the above listed materials for the scrim/mesh material as they are readily available and in common use as reinforcing scrim and mesh material.

In regards to claim 20: The tape according to claim 18 above, characterized by further comprising a protective outer layer (12) permanently adhered to and covering the tacky upper surface of the adhesive layer, the protective outer layer being non-adhesive and having a thickness of between approximately 0.030 to 0.060 inch (paragraph [0016] lines 13-14).

In regards to claim 21: The tape according to claim 18 above, characterized by the adhesive layer comprising cross-linked polymers. Hubbard discloses an adhesive layer that is not cross-linked. Applicant discloses that the layer may be non-cross-linked, partially cross-linked or fully cross-linked. As such having a layer that is non-

Art Unit: 3635

cross-linked is considered to be an obvious design choice that does not distinguish over Hubbard.

Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mule-Hide products ([www.mulehide.com/news5.html](http://www.mulehide.com/news5.html), 11/01/2001) in view of Hubbard (2003/0219564). Mule-Hide New Release discloses a tape product for bridging a gap between modular roof panels that have a roofing membrane, but does not teach the specific structure of the product. Hubbard discloses a self-adhering membrane that has a protective layer, reinforcing mesh and an adhesive layer that meets all of the requirements of claims 5-21 above. Claims 22-24 and 26-27 incorporate the same structure as claims 5-21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tape taught by Hubbard to bridge a gap between panels as taught by Mule-Hide as Hubbard's invention has a reinforcing mesh between protective and adhesive layers and is capable of bridging a gap between panels as taught by Mule-Hide and adhering to the roof. Therefore Mule Hide in view of Hubbard meets all of the claim limitation of claims 22-24 and 26-27.

Claim 25 recites the basic steps of "providing", "unrolling" "positioning" and "adhering". As such, it merely recites the obvious method of installing the tape recited in claims 5-21 above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3635

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Laux whose telephone number is 571-272-8228. The examiner can normally be reached on Monday thru Friday, 8:30am to 4:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko Slack can be reached on 571-272-6848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JL

JL  
10/12/2006



NAOKO SLACK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600